

ON NEW SPECIES OF TASMANIAN ARANIEDÆ.

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FAM. EPEIRIDÆ.

Gen. EPEIRA, Walck.

Epeira Mortoni, sp. nov. Plate. Fig. 1.

Femina.—Ceph. th., long, 4·8; broad, 4; facial index, 2. Abd., long, 10; broad, 6; legs, 1, 4, 2, 3 = 19, 14, 17·5, 10 mm.

Cephalothorax fulvus, greenish tinge, lake-brown reflections on cephalic part and lateral margins, fovea deeper shade; hairs white, silky, adpressed; slightly surpasses tibiæ of first leg in length; moderately depressed; pars cephalica depressedly convex, truncation visibly rounded, ocular eminence slight; lateral index equals two-thirds of facial; depth of *clypeus* scarcely equal to three-fourths diameter of an anterior centre eye; sides of pars thoracica well rounded; fovea large, sub-oval, longitudinal; caput and radial striæ slightly defined; profile-contour rises from thoracic junction at an angle of 30deg., slopes moderately across caput.

Fore and hind row of eyes tolerably and somewhat evenly recurved; fore-centrals of equal size; posterior, median-pair posited obliquely on dark, oval, prominent spots, separated by an interval equal to an eye's breadth and a half, scarcely their space and one-half from laterals; anterior centre eyes visibly more distant from each other than they are from hind pair, an interval rather exceeding their diameter; their space and a quarter from side eyes; laterals about one-third smaller than centrals, seated obliquely, more than half their radius apart, on separate tubercular eminences.

Legs fulvus, femora of two-first pairs reddish-brown, annuli reddish-fuscous; distal rings on femoral joints; central and apical on tibiæ and metatarsi; second half of tarsi shade off to dark brown; hairs dark, somewhat sparse; spines brown or black, numerous, irregular.

Palpi fulvus, fore-end of pars digitalis fuscous; hairs light; well spined; moderately long and slender.

Falces brownish-yellow, fangs dark; conical, vertical, flatly convex, length equals breadth of anterior row of eyes, their space visibly surpasses it.

Maxillæ fulvus, fuscous clouding; length perceptibly ex-

ceeds their breadth, much dilated at extremity, roundly pointed, inclined towards each other.

Labium darker than maxillæ; nearly as long as wide, conical.

Sturnum mahogany-brown, cordate, moderately developed eminences opposite coxæ.

Abdomen elongate-oviform, moderately convex above, sides steep, longitudinally wrinkled; base produced into two sub-conical elevations; deep lake-colour, with brownish penetrative tints, markings creamy-white; dorsal area displays two wide, sinuate, converging bands, extending from the rounded face of basal humps to second half of dorsum, enclosing a cunate area, where they are resolved into a series of more or less defined spots terminating at anus; side stripes broad, sinuate, compressed somewhat forwards, interrupted at the nearly free spots contiguous to base of humps; between the latter is a somewhat V-shaped mark, extremities dilated, central spot; this figure is followed by several more or less pronounced dots on median line of cunate area; the more strongly defined impressed spots occur on fore-half; anterior pair placed between humps, form a quadrilateral figure with second pair, longer than broad; latter pair included in the transverse line of four spots, which cause a constriction in each of the converging bands; central pair indent extremity of these bands, represent with second pair a trapezoid narrowest in front; lateral margins clouded with lake-black, display on superior line and interrupted border, resolved into spots; ventral shield, olive-green, passing into a brown on median line, margin, yellowish, elongate oval; *vulva* light greenish-yellow; wrinkled, sub-conical, prolonged into a remarkably long vermiform stylus, yellowish, two fore-thirds blackish, somewhat incrassated and depressed towards second half, sharply bent forwards, rapidly curved backwards; posterior face of corpus vulvæ displays a dark rimmed oval area, enclosed within is a fuscous plano-convex spot.

Var. a, *Cephalathorax* galbious, dorsum of caput and median band reddish brown, lateral margin fuscous. *Legs* galbious, femora of I. and II. suffused with brown-black, annuli broad, fuscous. Colouration of palpi lighter than legs. Pattern and colours of *abdomen* do not differ from type-form, except that the lake approximates more or less to a deep brownish-purple.

I have much pleasure in naming this handsome species after Mr. Alex. Morton, Curator of the Tasmanian Museum, to whom I am indebted for a large collection of spiders.

Epeira ventriosa, sp. nov.

Femina.—Ceph. th., long, 5·7; wide, 4·5. Abd., long, 12; wide, 11; legs, 1, 2—4, 3 = 22, 20, 13 mm.

Cephalothorax lake-brown, passing into brown on posterior incline and lateral borders, moderately clothed with adpressed, silky, whitish hairs; depressed; length equals metatarsus and tarsus of a leg of fourth pair; pars cephalica sub-aplanate, squarely truncated, ocular-eminence prominent; facial index exceeds lateral by one-fourth, equals one-half breadth of thorax; depth of *clypeus* plainly surpasses diameter of a fore-centre eye; pars thoracica ovate; indentation trisected; caput and radial striæ faint; contour of profile represents a moderate, even arch.

Fore-centre eyes of about equal size, form a quadrilateral figure widest in front; posterior row slightly recurved, median eyes rather further from fore-pair than they are from each other, an interval visibly surpassing their diameter; their space and a half from laterals; curvature of anterior row perceptibly stronger than hind row; median eyes separated by an eye's breadth and a half, divided from side-eyes by their space and a quarter; laterals one-third smaller than centrals, posited obliquely on a forward projecting tubercular elevation, less than their radius from each other.

Legs and cephalothorax concolorous, annulations broad, brown, not clearly defined; hairs fine, somewhat sparse; spines yellowish, base dark; fairly numerous, irregular; tibial spines equal to its own diameter in length; legs moderately stout, tibial joints cylindrical.

Palpi fuscous, annuli deeper tone; length equal to metatarsus and tarsus of first leg; spines numerous on radial and digital joints; palpal claw short, well curved, 9 teeth, 3 basal rapidly decreasing in size.

Falces deep, raw-sienna; conical, vertical, strongly gibbous at base in front; fore-third divergent, as stout as the femur of a third leg, length equal to anterior row of eyes; 4 teeth on outer row; inner 3.

Maxillæ nearly as broad as long, extremity much dilated, roundly pointed, inclined over *labium*, which is wider than long, sub-triangular; organs olive-brown, pale margins.

Sturnum mahogany-brown; hairs light; cordate; eminences opposite coxal joints.

Abdomen broad-oviform, base pointed; profile-contour ovate; humeral tubercles obtuse-conical; rather sparsely clothed with short, black bristle-like hairs, and soft white, latter following the lighter tints; pattern somewhat obscure; ground colour creamy-brown, mottled, ill-defined patches of a pale olive-brown, few orange-red stains, most pronounced about region of centre figure and tubercles; basal half displays an olive-brown cruciate figure, composed of two longitudinally placed, spindle-shaped spots, and two much

smaller lateral spots in line with tubercles; lateral margins show a series of chocolate-brown rib-like streaks, convexities directed backwards; basal end displays a series of fine horizontal streaks, limited by first rib-like line; ventral surface chocolate-brown; shield pale burnt-sienna, large, brown, trapezoidal mark in centre; spinners short; *corpus vulvæ* lake-brown; sub-reniform, of moderate size; sides abrupt, project outwards; face bordered by two narrow costæ, inner black, encloses a heart-shaped area containing two foveæ, divided by a longitudinal groove; apex of area limited by the rima genitalis; springing from anterior border of corpus is a long, tapering, flat, transversely rugose, hairy, yellowish scapus, curving backwards and upwards.

Single specimen. A.M.

Epeira notacephala, sp. nov.

Femina.—Ceph. th., long, 4; broad, 3; facial index, 1.5. Abd., long, 5; broad, 4. Legs, 1, 2, 4, 3 = 12.5, 11.5, 11, 7 mm.

Cephalothorax light brownish-orange, reddish dots, two fuscous spots transversely posited in centre of caput; thoracic part displays two rows 6—2 of similar tinted spots; hind and fore-centre pair enclose a V-shaped figure within fovea. This figure is connected by short bars with next pair of spots in anterior row; marginal band brown, projects a triangular mark on basal half, fades away forwards; fairly-well clothed with rather coarse, whitish, adpressed hairs; length equal to metatarsus and tarsus of a leg of first pair; pars cephalica sub-aplanate, sides abrupt, somewhat retreating; lateral index equals space between a fore-lateral eye and the central furthest from it; depth of *clypeus* equals diameter of a fore-centre eye; pars thoracica oval, convex, fovea sub-circular, shallow; normal grooves faint; profile-contour represents a somewhat prominent arch, cephalic and thoracic incline of about equal grade.

Eyes of fair size, placed on fuscous rings; posterior row perceptibly recurved; median pair visibly more than an eye's breadth apart, their space and one-third from laterals of same row; anterior row more distinctly recurved; centrals one-third larger than hind pair, perceptibly closer to these eyes than they are to each other, an interval surpassing their diameter by one-fourth; divided from side eyes by rather less than two-thirds their space; laterals scarcely one-third smaller than posterior centrals on fuscous rings, oblique, about two-thirds their radius from each other; fore-eye posited on a yellowish projecting tubercle.

Legs pale yellowish stone-colour, fuscous patches and spots on inferior side of femoral and coxal joints, indications of annuli

on metatarsi; tarsi shade off rapidly into reddish-fuscous; hairs pale-yellow; spines yellowish, dark base; fine; tibial shorter than transverse diameter of article, numerous; tibiæ of I. and II. have on inferior side a double row of 5, 5; metatarsi 4, 3; legs moderately strong; II. and IV. of about equal length; patellæ and tibiæ compressed, grooves slight; superior tarsal claws—1st pair, 9 comb teeth; inferior claw 2 points.

Palpi colour and armature of legs; length, 4.6 mm.; palpal claw well curved, 10 comb teeth, 2 basal small.

Falces fulvus, glossy, apices brownish; conical, base in front gibbous, vertical, slightly exceed pars digitalis of palpus in length, as stout as the femur of a first leg; double row of black teeth, outer 4, inner 3.

Maxillæ greenish-yellow, centre clouded with light-brown, rather longer than broad, enlarged forwards, obtusely pointed, inclined towards each other.

Labium pale greenish-yellow, base fuscous, wider than long, triangular.

Sturnum light-brown, passing into dark chestnut-brown on margins, spotted; cordate, eminences opposite coxal joints.

Abdomen sub-triangular, base truncated, depressed, humeral tubercles well developed, conical apices brownish, semi-pellucid, project upwards and somewhat backwards; posterior tubercle stout, conical, prominent wrinkle or tubercle beneath; lateral borders rugose; hairs somewhat sparse, appressed, whitish, few pale yellow, dark based, short bristles project from fuscous spots; integument pale brownish stone-colour; folium tapers from fore-tubercles to posterior tubercle, defined by a light fuscous, sinuating line; median streak similar shade; three pair of blue-black impressed spots, two anterior pairs largest, form a trapezoid narrowest in front; light fuscous, nearly vertical, bands on lateral margins. *Corpus vulvæ* fulvus, somewhat triangular, convex elevation, wrinkles transverse, well-defined; broad and concave in front, margins tumid; projecting from within the dark concavity is a yellowish, rather wide septum, as broad at truncated apex as long.

Several examples. A. M.

Epeira singulara, sp. nov. Plate. Fig. 2.

Femina.—Ceph. th., long, 4; broad, 3.4; facial index, 2. Abd., long, 6.7; broad, 6. Legs, 1, 2, 4, 3 = 13, 12, 11, 8 mm.

Cephalothorax bright brownish-lake, clouded about caput and lateral margins with blackish-lake; hairs somewhat sparse, silky white and dark, former predominate on thoracic part; pars cephalica flatly-convex, dips abruptly into depression on posterior incline of thorax; truncation perceptibly rounded, ocular elevation fairly developed, lateral index equals space

from a hind-lateral eye to central of same row furthest from it; depth of *clypeus* scarcely equal to diameter of a fore-centre eye; *pars thoracica* broad-oval, convex, hind-slope occupied by an orange-brown, semi-oval, flatly-convex depression, fovea at apex, triangular, slight; normal grooves not well-defined; profile-contour rises from thoracic junction at a moderate angle, caput curve slopes at an angle of 35deg. to hind-row of eyes.

Posterior and anterior row of *eyes* moderately recurved; hind-median pair separated from each other by an interval equal to their diameter and one-half, and from laterals by their space and three-fourths; fore-centre eyes plainly more than their breadth from one another, rather less than an eye's diameter from posterior centrals, which they equal in size; distance separating them from side eyes visibly surpasses their space; laterals about one-half size of centrals, posited obliquely on moderate tubercular elevations, nearly contiguous.

Legs, femora, especially of I. and II., bright brownish-lake, other joints fulvus, green tinge; annuli fuscous, indications on thighs of III. and IV.; two wide annulations on patellary joints; three on tibial and metatarsal; fore-end of tarsi fuscous; moderately haired; spines brownish, somewhat sparse; tibial spines scarcely equal, transverse diameter of article; patellæ and tibiæ compressed, show two longitudinal grooves; former articles two-thirds length of latter, of equal length on third pair; superior tarsal claws—1st pair, stout, well curved, 8 teeth, 5 strong combs, 3 basal close small; inferior claw long, sharply bent, 2 small points.

Palpi fulvus, green tinge, annuli of *pars humeralis* and two fore-thirds of digital joint chestnut-brown; hairs whitish; spine armature moderate; palpal claw less curved than tarsal; nine teeth increasing in length and strength.

Falces reddish-chestnut, strongly gibbous at base in front, conical, vertical, half as broad as long; length equal to space occupied by front row of eyes; outer row of teeth, 4; inner, 3.

Maxillæ, length and breadth at extremity about equal, roundly pointed, inclined over *labium*, which is perceptibly wider than long, roundly and somewhat sharply pointed; organs, dark fuscous, margins, greenish-yellow.

Sturnum, lake-black; hairs, white; cordate, centre prominent, eminences opposite *coxæ* moderate.

Abdomen angular-oviform, projects over base of cephalothorax, depressedly convex above; contour of profile represents a somewhat even curve across dorsum, dips abruptly to spinners from first row of tubercles, depth of dip equal to about one-half length of abdomen; humeral tubercles

obtuse-conical, project upwards and outwards; posterior tubercles, 5; first row slightly developed; tubercle of second row most prominent; clothed with short copper-coloured and white hairs; integument has a soft velvety appearance, brownish-fawn colour, speckled with light-brown, largest and scarcest spots deepest hue; folium tapers from humeral tubercles to spinners; margins sinuate, fuscous; flesh colour of tubercles encroaches into the normal fawn-colour; in line with eminences is a centrally-broken fuscous, oblong, transverse mark, connected by a short band with a greenish, ill-defined bar, surpassing the former in length; these marks occur between first and second pair of impressed spots; base of folium angular, defined by dark shading; at constriction of folium on posterior side of second pair of spots is a broken cross-bar; second occurs below third pair of impressed spots; posterior two-thirds of compressed portion of folium obliterated by a remarkable, large, sinuated, brass-coloured patch, metallic reflections, which curves round, suffusing almost all the right side of abdomen; ventral surface dull brown, lake tinge, fuscous clouding; shield fuscous. *Corpus vulvæ*, deep orange, costæ passing into red chestnut, scapus similar tints; stylus lemon-yellow; corpus trapezoidal nearly as wide at base as long, longitudinally depressed, laterally bounded by deep, projecting costæ, increasing somewhat in width towards, and revolute above the rima genitalis; scapus vulva curves over base of corpus, three-fourths its length, elongate-oval, transversely wrinkled, lateral border wide, tapers at fore-end, incurvate; apex of scapus projects rather beyond base of stylus; latter strongly segmented, base stout, second half tapers rapidly, about three-fourths length of scapus.

Only a single example of this handsome species was contained in Mr. Morton's collection; probably the remarkable irregular metallic markings on the abdomen are unique.

Var. a.—Colouration of *cephalothorax* and *legs* resemble type-form. *Abdomen* grayish-fawn colour, markings deeper tone; pattern does not differ essentially from type-form.

Two specimens. A.M.

Epeira viridula, sp. nov.

Femina.—Ceph. th., long., 2.5; broad, 1.8; facial index, 1. Abd., long., 4; broad 3.5. Legs, 1, 2, 4, 3. = 7.5, 6.5, 6, 4 mm.

Cephalothorax light brown, fuscous clouding; fairly clothed with whitish hairs; clathrate; pars cephalica moderately convex, roundly truncated, ocular elevation prominent; *clypeus* in height visibly less than diameter of a fore centre eye; pars thoracica broad-ovate, convex; posterior incline depressed; fovea sub-oval, shallow, radial striæ well defined,

caput grooves moderately; profile line rises from thoracic junction at a tolerable angle to limit of caput, latter horizontal, perceptibly arched, eye eminence projects forwards.

Anterior and posterior row of eyes moderately and somewhat equally recurved; hind median eyes largest of eight, posited obliquely on the more prominent part of eminence, divided from each other by an interval equaling an eye's diameter and two-thirds, and from laterals of same row by scarcely their space and a quarter; fore-centrals less than one-third smaller than hind-pair, visibly more than their diameter from them, removed from each other by a space equal to an eye's breadth and one-quarter, separated from side eyes by rather more than their space; laterals about half size of fore centrals, seated obliquely on a common, strongish tubercle, their radius apart.

Legs fulvus, faint green tinge, fuscous patches on femoral joints, resolved somewhat into distal rings, on III. and IV.; patellæ clouded, tibiæ and metatarsi two annuli; hairs white, somewhat sparse; spines light, scarce; legs strong, patellary and tibial joints compressed, two well-defined grooves; superior tarsal claws—1st pair, 9 comb teeth; inferior claw 2 points.

Palpi colour and armature of legs; palpal claw 10 teeth.

Falces light-fulvus, clouded, conical, vertical, basal half prominent in front; length rather shorter than radial and digital joints of palpus, about as stout as the femur of first leg.

Maxillæ, length somewhat surpasses breadth, enlarged forwards, roundly pointed, inclined over *labium*, latter nearly as long as wide, well pointed, margin tumid; organs chocolate brown, fore-end pale olive brown.

Sturnum blue-black; cordate, eminences opposite coxal joints well-developed.

Abdomen oviform, depressed, humeral tubercles obtuse-conical, directed somewhat outwards and backwards; posterior tubercles well-developed, centre tubercle of first row much the largest and stoutest; tubercle of second line as strong as central of first; third short and fattened; pale brownish-fawn colour, suffused in more or less transverse patches, with dull rifle-green, few spots of same hue; margin of folium acutely sinuate, commences at base of humeral prominences, curves over, tapers to posterior row, obliterated on dip of abdomen; inner border olive-brown, outer creamy-brown; short angular mark of same colour on basal end; ill-defined, somewhat lanceolate, greenish figure in centre of dorsum; lighter shade predominates on ventral surface; shield olive-green, oval. *Vulva* pale yellowish-brown; represents a low, transverse,

oval elevation, prolonged into a broad, tapering, flatly convex, close lying scapus, fore-end slightly segmented.

Single example. A. M.

ÆREA, gen. nov.

Cephalothorax rather longer than broad, sub-parallel, lateral constriction slight; cephalic part large, elevated, rather abruptly inclined on all sides from posterior central eyes; anterior angles prolonged into strong, abscinded, sub-conical prominences, depressed above, directed outwards and forwards beyond the frontal line; *clypeus* retreating, centrally prolonged, pointed, depth equal to the space occupied by the fore-centre eyes; thoracic part depressedly convex; at junction with caput on same plane as anterior median eyes, indentation, radial and caput striæ shallow and irregular; contour of profile represents a rather even line rising from thoracic junction, at an angle of 30deg., to posterior central eyes, incline across ocular area somewhat more abrupt.

Eyes tolerably small, in three rows—4, 2, 2; or two procurved rows, posterior line being very strongly curved; fore-centrals form a trapezoid narrowest in front, rather longer than broad behind; laterals posited on truncated apex of lateral projections.

Legs of moderate and somewhat equal length, 1—2, 4, 3; first and second pairs stoutest, of about equal strength; patellary, tibial and metatarsal joints of two first pairs sub-aplanate; patella rather shorter than tibia, metatarsus and tarsus of about the same length; together nearly equal the two former articles in length; tibial and metatarsal joints armed their entire length, on both edges, with long, curved spines, intermediate spaces occupied by 3 or 4 smaller spines of similar form; tarsi furnished with an inner and outer row of close spines, not differing from metatarsal, except that they are shorter and of somewhat even size; tibiæ and metatarsi of third and fourth pairs have a few straight spines; superior tarsal claws of first pair, short, well-curved, 8 comb-teeth; inferior claw sharply bent; axillary claws.

Palpi moderately strong, armed with spines; palpal claw long, slender, 7 teeth, free end short.

Falces of tolerable strength and length, inwardly inclined.

Maxillæ short, length perceptibly surpasses the breadth, fore-end enlarged, roundly pointed, directed towards the *labium*, which is semi-circular, everted, breadth exceeding the length. *Sturnum* sub-oval.

Abdomen sub-rhomboid, base truncated, posterior extremity enlarged, somewhat depressed above

Ærea alticephala, sp. nov. Plate Fig. 3.

Femina.—Ceph. th., long, 3; broad, 2·5; facial index, 2·4. Abd., long, 5·5; broad, 5·5. Legs, 1—2, 4, 3 = 7·5, 6·5, 4. mm.

Cephalothorax lake-black about ocular area, fore-sides of thorax, and lateral margins; dark shade passes between hind-median eyes tapering to limit of caput, enlarged at fovea; posterior incline of cephalic and thoracic parts fulvus, passing into a brownish lake; hairs whitish, appressed, somewhat in lines; luconose; sub-parallel, rounded posteriorly, lateral constriction slight; pars cephalica elevated, slopes on all sides rather abruptly from hind central eyes; grooved depression between latter; fore-angles developed into very stout, sub-conical projections, flatly convex above, directed outwards and forwards beyond frontal line; *clypeus* retreating, pointed, height equal to space of anterior median eyes; pars thoracica depressedly convex, on same plane as fore-centre eyes at its junction with caput; fovea shallow, ill-defined; caput and radial striæ slight, irregular; profile-contour rises from thoracic junction with a somewhat even line to posterior median eyes, at an angle of 30deg, slopes rather more abruptly to anterior centre eyes.

Eyes rather small; anterior row procurved; line through centrals intersects lateral pairs; median eyes posited somewhat obliquely on small, crimson-lake, discoid tubercles, separated from each other by an interval perceptibly exceeding an eye's breadth, and from laterals of same row by nearly twice their space; posterior row straight; forms a very strongly procurved line, with eyes of second row; eyes one-fourth larger than anterior pair, seated obliquely on well-developed, crimson-lake, discoid elevations, about one-fourth further from fore-centrals than they are from each other, an interval surpassing space of anterior pair by scarcely one-third; interval between tubercles fully equal to one-half the distance dividing them from fore-pair of tubercular eminences, separated from hind-laterals by their space and a half; side-eyes placed obliquely on abscinded apices of lateral projections, anterior eye more than twice size of posterior, latter about equal to a fore-central, divided from eye next to it by rather more than one-fourth its own diameter.

First and second pairs of *legs* lake-brown, suffused with chocolate-black, somewhat obscure annuli on tibiæ; hind pairs fulvus; coxal joints, two distal thirds—more or less—of femora and patellæ suffused with dark chocolate-brown; wide basal annulations on tibial, metatarsal and tarsal joints of same shade; legs, 1st pair rather stout, thighs compressed; patella and tibia sub-aplanate, former article grooved, less than one-fourth shorter than tibial joint, latter sub-linear; metatarsus and tarsus of nearly equal

length, together scarcely surpassed by the patellary and tibial joints; penultimate article aplanate, base incrassated; hairs whitish and yellowish, most numerous on tibiæ of I. and II.; tibial and metatarsal joints of I. and II. armed their entire length on both edges with long, flattish, brown, curved spines, directed forwards and outwards; metatarsal longest; tibiæ have about 6 on each side; metatarsi 7 on inner, 4 on outer edge; space between long spines occupied by from 3 to 4 much shorter spines of similar form and colour; lateral sides of tarsi armed the whole length with close spines similar but shorter than metatarsal; tibiæ of III. have about 3 spines beneath, 1 above; metatarsi 3 or 4 on inferior side; tibiæ of IV.; IV. pair 1 on superior, 3 or 4 on inferior side; metatarsi 4 or 5; superior tarsal claws—1st pair, short, well curved, 8 comb teeth; inferior claw sharply bent, points?; axillary claws.

Palpi, humeral and cubital joints fulvus, former article clouded, radial and digital lake-brown, clouded with black brown, both articles fairly furnished with hairs; cubital joint 1 spine; radial 2; digital 7; humeral rather shorter than two following articles together, two latter scarcely equal digital joint in length; palpal claw long, slender, first half straight, second moderately curved; 7 teeth, free end short.

Falces glossy, deep chocolate brown, apices lake tinge; bristle-like hairs at extremity, conical, inclined inwards, scarcely as long as radial and digital joints of palpus, rather stouter than the pars femoralis of a first leg; double row of 5 short teeth.

Maxillæ light reddish brown, pale greenish yellow apices; short, breadth nearly equals length, dilated forwards, roundly pointed, directed towards each other.

Labium chocolate brown, apex pale greenish hue; semi-circular, perceptibly wider than long, everted.

Sturnum, dark fuscous; few coarse hairs, sub-oval.

Abdomen sub-rhomboid, base truncated, posterior fourth tumid, convoluted, dotted with small pits, sides dilated; dorsum rises, almost in line with humeral angles, into an obtuse-conical elevation; lateral margins longitudinally wrinkled; abdomen prolonged nearly one-third its length beyond spinners, which are short; darker parts, more especially, marked with rather large, circular or oval lacunose depressions, surrounded by numerous, very fine, sinuating wrinkles; hairs white, short, sparse; ground colour marbled with purple-black and brown; large, deep, creamy-coloured, cruciate figure occupies dorsal area, fore-part nearly as wide as long, displays five light brown impressed spots, three form a procurved line near basal margin, two occur at foot of conical elevation,

latter pair and centre spot of anterior line connected by a slight bluish cross; base of cruciate figure short, compressed, terminates at the creamy-coloured posterior third, this part throws off into the dark integument marks of irregular shape, connected with the somewhat sinuating, transverse bar, which curves round humeral angles passing into the creamy coloured ventral surface; vulva and spinners enclosed within an olive-black patch; triangle of three spots in centre, apex directed backwards. *Corpus vulvæ*, dull lake-brown; sub-reniform, moderately depressed area, bounded by an involute costa, inferior margin low and somewhat rugose, much enlarged at curvature, curved extremities divided by a pointed septum, whose breadth scarcely equals the greater width of costa; above the rima-genitalis are two short, black, clavate processes, directed towards apex of septum.

Single specimen. A.M.

COLLINA, gen nov.

Cephalothorax rather longer than broad, sharply constricted on lateral margins; cephalic part roundly truncated, ocular elevation low; fore-half depressedly convex, sides somewhat abrupt, depth exceeds breadth of dorsal surface; fovea and normal grooves well-defined; contour of profile strongly arched, highest part at the occiput; fore-third of caput inclined at an angle of about 45deg.

Eyes of moderate size, sub-equal, posterior and anterior rows slightly recurved, fore-centre eyes form a trapezoid widest in front; laterals separated from each other by an interval scarcely equal to their own radius.

Legs rather slender, moderately long—1, 2, 4, 3; first and second, third and fourth of about equal strength; patellary and tibial joints cylindrical; armature sparse, hairs fine, outstanding; spines slender, bristle-like; superior tarsal claws moderately curved; axillary claws.

Palpi, cubital, radial and digital joints, furnished with long, slender spines; numerous on the penultimate and terminal joints.

Falces conical, inclined forwards, stout.

Maxillæ enlarged towards extremity, roundly pointed, inclined towards *labium* which is rather wider than long, roundly pointed.

Sturnum cordate, eminences opposite coxæ well-developed.

Abdomen oviform, large.

Collina glabircira sp. nov. Plate fig. 4.

Femina.—Ceph. th., long, 4; broad, 3. Abd., long, 7; broad, 5·8. Legs, 1, 2, 4, 3 = 15·5; 12·5; 11·5, 9 mm.

Cephalothorax, chrome-yellow, suffused with a light-brown on cephalic part; freckled with brown; lateral border deeper tone; hairs pale, very sparse; length equals patella and tibia of 4th leg; pars cephalica large, first half depressedly convex, sides somewhat abrupt, roundly truncated, eye eminence low; lateral index equals two-thirds of facial; *Clypeus* retreating, surpasses in depth diameter of a fore-median eye; pars thoracica oval, convex, fovea sub-oval, caput and radial striæ tolerably strong; profile-contour strongly arched, prominent at occiput, dips across fore-third at an angle of 45deg.

Eyes of tolerable and about equal size, on blackish-lake rings; posterior row slightly recurved; centre-eyes divided by three-fourths their diameter, rather more than their space from laterals; anterior row more distinctly recurved, median pair less than their diameter and a half from each other, perceptibly more than an eye's breadth from hind-centrals, removed scarcely three-fourths their space from side eyes; laterals placed obliquely on separate lake-brown tubercular eminences, somewhat less than their radius apart, tubercles small, anterior strongest.

Legs somewhat duller hue than cephalothorax, tibial and metatarsal joints greenish shade; hairs fine, black; spines slender, black; 2 or 3 on femora; patellæ 1; about 6 on tibiæ of I. and II., less on same article of two hind-pairs; metatarsal joints apparently devoid of spines, except metatarsi of III., which have 1 spine; legs somewhat slight, patellary and tibial joints cylindrical.

Palpi and legs concolorous; bristle-like spines rather numerous on pars radialis and digitalis; humeral joint equal in length to cubital and radial together; two latter articles as long as digital joint.

Falces chrome-yellow; hairs black, sparse; conical, base gibbous, inclined forwards; small, plano-convex, conical lobes on outer side.

Maxillæ pale fulvus, base lightly suffused with olive brown, nearly as wide as long, dilated forwards, roundly pointed, directed towards each other.

Labium yellowish, fuscous shading; rather wider than long, roundly pointed, one-half length of maxillæ.

Sturnum fulvus, marbled with brown; heart-shaped, eminences opposite coxal joints.

Abdomen broad oviform, projects over base of cephalothorax, convex above; ground colour dull lake-brown, suffused with flecks; dorsum flecks dark creamy-colour, lobate, more or less confluent; medial streak, normal colour, terminates at posterior incline, displays four—probably in some examples

five—arcuate lines of similar colour; flecks on lateral margins inconspicuous, approximate to ground colour; ventral shield olive brown; branchial opercula chrome-yellow. *Vulva* orange brown; transverse, oval area, occupied by two deep, circular foveæ, intersected by a dark bordered, broad septum, their equal in breadth, laterally prolonged above the rima genitalis, extremities acute, revolute.

Single example. A.M.

FAM. CELAENIDEN.

Gen. CELAENIA, Thor.

*Celaenia voraginos*a, sp. nov. Plate Fig. 5.

Femina.—Ceph. th., long, 5.2, broad, 6. Abd., long., 10; broad, 14; deep, 11. Legs, 1—2, 4, 3 = 21.2, 12, 10 mm.

Cephalothorax deep fulvus, olive tinge, passing into coffee-brown on lateral margins, furnished with numerous papillæ—mostly in rows, projecting, short, stout, black bristles; somewhat reniform, narrowly constricted at caput, pars cephalica, rather depressed, sides abrupt, mamiform eminences well-developed; prolonged somewhat upwards into a stout sub-conical projection, nearly as long as wide at base, occupying greater part of frontal space; *clypeus* retreating, depth perceptibly exceeds interval between a fore-centre eye and the lateral next to it; pars thoracica—viewed laterally, obtuse-conoid; series of six indentations occur at edge of posterior inclination, centre pair divided by the bisected fovea; radial striæ somewhat deep and short; caput grooves faint forwards, form strong, angular depressions at limit; profile-line rises at an angle of 30deg. from thoracic junction, dips forwards at a rather stronger inclination to mamiform elevation—which represents an obtuse-conoid projection, bends slightly upwards to posterior row of eyes.

Eyes tolerably small; posterior row recurved, line through centrals strikes fore-edge of anterior laterals, front row more strongly recurved; fore-central eyes posited on prominence, form a nearly quadrilateral figure, enclosing conical apex, front line rather shorter than hind, visibly surpasses sides; posterior pair one-third smaller than fore-centrals, placed on slight discoid elevations; anterior pair little more distant from side eyes than are the hind-centrals, a space about equal to the interval between one another; laterals scarcely equal to hind centrals in size, seated obliquely on a strong prominence nearly contiguous.

Legs creamy-yellow, second half—rather less—of femoral joints coffee-brown, stains on first half; patellæ and annulations normal brown; tibiæ have three wide rings; metatarsi three less defined annuli; tarsi suffused; annulations on tibial and metatarsal joints of two posterior pairs somewhat obliterated; I. and II., III. and IV. of about equal strength;

femora of two first pairs much the stoutest; tibial joints cylindrical, slender, about one-third longer than patellæ; metatarsi nearly twice length of tarsi, together one-third shorter than tibæ; hair short, somewhat sparse; femoral joints of I., II. and III. armed on inferior side with two irregular rows of sub-conical tubercles of various sizes, projecting short spines, tarsal claws of normal form; outer claw much the longest and strongest; inner sharply curved, three close teeth at base; inferior claw closely inflected, perceptibly stronger than inner; two pairs of axillary claws.

Palpi, pars humeralis creamy-yellow, brown rings, following joints fulvus, suffused with brown; armature short, black hairs; moderately long, stout; radial joint rather the longest and strongest, enlarged forwards; cubital joint much the shortest; pars humeralis and digitalis of about even length; palpal claw stout, sharply bent, 3 close teeth.

Maxillæ light coffee-brown; apices pale, greenish; moderately enlarged forwards, pointed, directed towards each other.

Labium base brown, fore-half pale; oval, rather wider than long.

Sturnum chocolate-brown, well-defined, large, yellowish lanceolate figure in centre, point directed towards lip, haft tapers to posterior end; cordate, tapers from the somewhat prominent eminences opposite coxal joints of third pair.

Abdomen large, nearly one-third wider between humeral tubercles than long; base rather broader than cephalothorax, concave, angles prominent, rounded; viewed laterally conoid, apex abscinded; summit occupied by large convoluted, somewhat semi-globose humps, sloping abruptly to the short, conical humeral tubercles, divided by a level space about one-half their own diameter; each hump indented by seven deep pits, three of which occur on each margin of intervening space; hind lobes of humps project over the abrupt posterior end, which is semi-oval; the outer pair display at their extremity brownish, nipple-like tubercles; posterior face of abdomen shows several well-marked foveæ, two largest form a trapezoid, widest below, with the hind-pair of the above-mentioned six pits; semi-circle of five impressed spots on posterior side of humeral tubercles; between hind-pair of foveæ and spinners is a large, somewhat oval space enclosed by small pits, area occupied by two centrally interrupted, transverse indentations; anterior slope slightly pitted; fore-part of abdomen creamy-colour, graduating into patches of pale brownish tints; on margin of basal concavity is a black, heart-shaped figure, on either side of it two streaks curve off towards fore-tubercles, upper streak brown, lower bluish; summit and posterior side light greyish fawn colour; humps and fore-sides appear to be tattooed with bluish lines, pattern

on fore-slope without any determinate limits, fades away into ground colour; anterior border of humps and posterior border of fore-patches blackish, somewhat sinuating, curve round the creamy-brown humeral tubercles; resolved behind into conspicuous, indigo-coloured, lunulate marks curving upwards round apex of the semi-oval area; latter and impressed spots on posterior region reddish. *Vulva* represents a narrow, transverse, brownish depression, projecting—over the rima genitilis, a moderately deep, cup-shaped, yellowish process.

Single example. A.M.

Celaenia tumidosa, sp. nov.

Femina.—Ceph. th., long, 6; wide, 6.8. Abd. long, 10.2; wide, 15; deep, 10. Legs, 1—2, 4, 3 = 23, 14, 12, mm.

Cephalothorax light mahogany-brown, passing into pale yellow-brown on margins, olive tinge; somewhat suffused and speckled with olive-brown; numerous papillæ projecting short, black hairs, chiefly in rows; cephalic part somewhat aplanate, sides abrupt; produced forwards and moderately upwards into a strong sub-conical projection; mamiform eminences well-developed; *clypeus* retreating, height visibly surpasses interval between a fore-median eye and the lateral next to it; thoracic region—viewed laterally, conoid, margin of hind-slope displays six rather deep indentations, bisected fovea intersects central pair; radial striæ well-defined, short; caput grooves represent deep angular indentations at junction with thorax, shallow forwards; contour of profile rises from thoracic junction at an angle of 30deg., inclined at about the same angle to base of the obtuse-conical mamiform prominences, bends slightly upwards to hind row of eyes.

Eyes rather small; fore-centrals about one-third larger and fore-laterals one-third smaller than hind-median pair; posterior lateral eyes visibly smaller than anterior pair; posterior row recurved, line through centrals intersects side-eyes; anterior row recurved, curvature stronger than posterior; fore-centrals seated on prominence, enclose conical apex; hind-pair rather more distant from each other than are the fore-pair, interval between latter pair visibly surpasses the space separating them from posterior centrals, which are posited on small discoid tubercles; fore and hind-centre eyes divided from laterals by an interval perceptibly exceeding space between fore-centrals; side eyes seated obliquely on tolerably strong elevations; three-fourths diameter of a posterior eye apart.

Legs green-tinged straw-colour, markings coffee-brown; second half of femoral joints dark; first half of anterior pair splashed; patellæ uniform brown, more or less broken and

confluent annuli on tibiæ; fore-end of metatarsi and tarsi suffused; I. and II., III. and IV. of about equal strength; thighs of first and second pairs much the strongest; tibiæ cylindrical, slender, one-third longer than patellary joints; metatarsi twice as long as tarsi, together shorter than tibial joints by one-third; hairs, fine, short; femoral joints of first, second, and third pairs armed beneath with two irregular rows of sub-conical tubercles, of different sizes; projecting short black spines; outer superior tarsal claw much the stoutest and longest; inner claw sharply curved; three close teeth; inferior claw closely inflected, somewhat exceeds inner both in length and strength; axillary claws.

Palpi greenish-brown; armature, fine, black hairs; stout, moderately long; radial joint incrassated forwards, surpasses other articles in length and strength; pars cubitalis, short; penultimate and digital joints of about same length; palpal claw short, sharply bent; three close teeth.

Falces greenish-brown, suffused with a deeper shade; somewhat hairy; taper moderately, directed inwards, fully as long as pars radialis of palpus; about as stout as basal end; fang, short.

Maxillæ, light greenish-brown, short; second half dilated, roundly pointed, directed towards each other.

Labium and maxillæ concolorous, perceptibly broader than long, semi-circular.

Sturnum fulvus, border fuscous, haired, oval.

Breadth of *abdomen* between the short, outward projecting humeral tubercles exceeds the length by scarcely one third; profile contour sub-conoid, anterior slope moderate, posterior dip abrupt; base procurved between anterior rounded protuberances; crest occupied by two large semi-globose, convoluted humps, prominent behind, separated by a level area about one half their diameter; impressed spots which occur on humps and on the fore and hind smooth regions do not differ essentially in their arrangement from the similar indentations found on *T. voraginosa*; ground colour of anterior slope creamy-fulvus, black heart-shaped spot above petiole throws off on either side, two olive-black sinuating lines converging towards each other on inner side of fore protuberances, latter display at their base, upper side, a dark impressed spot; humps closely tattooed with bluish-green lines and leaf-like marks; sides of anterior incline figured with similar but more open pattern; posterior side has a light copper-brown hue, suffused with an olive-brown shade, faint bluish streaks, indentations similar tint. *Vulva* (somewhat shrunken) represents a transverse, brownish, oval indentation,

margin above the rima genitalis produced into a rather large everted lip, brownish yellow above, whitish beneath.

Single example. A. M.

EXPLANATION OF PLATE.

Fig. 1. *Epeira Mortoni*, sp. nov. Vulva.

Fig. 2. *Epeira singulara*, sp. nov. Vulva.

Fig. 3. *Ærea alticephala*, sp. nov. Female, three times natural size; a, caput; b, part of a fore-leg; c, vulva.

Fig. 4. *Collina globicira*, sp. nov. Female, three times natural size; a, vulva.

Fig. 5. *Celaenia Voraginososa*, sp. nov. Caput.